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ABSTRACT

This module is one of a series of 127 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational teachers. The competencies upon which these modules are based were identified and verified through research as being important to successful vocational teaching at both the secondary and postsecondary levels of instruction. The modules are suitable for the preservice and inservice preparation of teachers and other occupational trainers in all occupational areas. This module contains three learning experiences that are designed to give teachers/student teachers skill in locating and obtaining student instructional materials that meet educational goals. Each learning experience contains an objective, several activities, information sheets, resource lists, and a self-check with model answers. The final learning experience requires the teacher/student teachers to demonstrate competency in applying the material of the module in an actual teaching situation. (KC)

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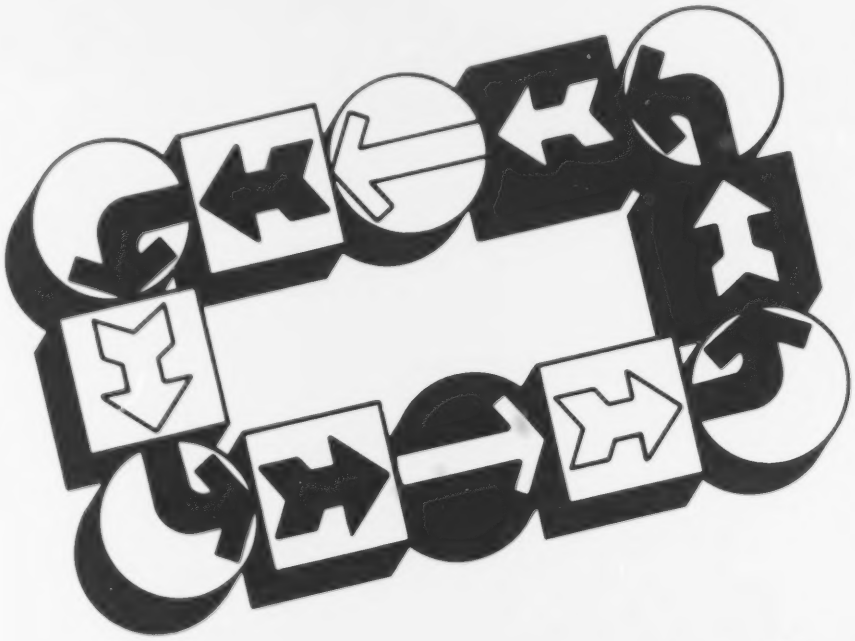
MODULE B-5

Select Student Instructional Materials

Second Edition



Module B-5 of Category B—Instructional Planning
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

CE050433

AMERICAN ASSOCIATION FOR VOCATIONAL INSTRUCTIONAL MATERIALS
The University of Georgia
120 Driftmier Engineering Center / Athens GA 30602

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

FOREWORD

This module is one of a series of 127 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational teachers. The competencies upon which these modules are based were identified and verified through research as being important to successful vocational teaching at both the secondary and postsecondary levels of instruction. The modules are suitable for the preparation of teachers and other occupational trainers in all occupational areas.

Each module provides learning experiences that integrate theory and application; each culminates with criterion-referenced assessment of the teacher's (instructor's, trainer's) performance of the specified competency. The materials are designed for use by teachers-in-training working individually or in groups under the direction and with the assistance of teacher educators or others acting as resource persons. Resource persons should be skilled in the teacher competencies being developed and should be thoroughly oriented to PBTE concepts and procedures before using these materials.

The design of the materials provides considerable flexibility for planning and conducting performance-based training programs for preservice and inservice teachers, as well as business-industry-labor trainers, to meet a wide variety of individual needs and interests. The materials are intended for use by universities and colleges, state departments of education, postsecondary institutions, local education agencies, and others responsible for the professional development of vocational teachers and other occupational trainers.

The PBTE curriculum packages in Categories A – J are products of a sustained research and development effort by the National Center's Program for Professional Development for Vocational Education. Many individuals, institutions, and agencies participated with the National Center and have made contributions to the systematic development, testing, revision, and refinement of these very significant training materials. Calvin J. Cotrell directed the vocational teacher competency research study upon which these modules are based and also directed the curriculum development effort from 1971 – 1972. Curtis R. Finch provided leadership for the program from 1972 – 1974. Over 40 teacher educators provided input in development of initial versions of the modules; over 2,000 teachers and 300 resource persons in 20 universities, colleges, and postsecondary institutions used the materials and provided feedback to the National Center for revisions and refinement.

Early versions of the materials were developed by the National Center in cooperation with the vocational teacher education faculties at Oregon State University and at the University of Missouri—Columbia. Preliminary testing of the materials was conducted at Oregon State University, Temple University, and the University of Missouri—Columbia.

Following preliminary testing, major revision of all materials was performed by National Center staff, with the assistance of numerous consultants and visiting scholars from throughout the country.

Advanced testing of the materials was carried out with assistance of the vocational teacher educators and students of Central Washington State College; Colorado State University; Ferris State College, Michigan; Florida State University; Holland College, P.E.I., Canada; Oklahoma State University; Rutgers University, New Jersey; State University College at Buffalo, New York; Temple University, Pennsylvania; University of Arizona; University of Michigan—Flint; University of Minnesota—Twin Cities; University of Nebraska—Lincoln; University of Northern Colorado; University of Pittsburgh, Pennsylvania; University of Tennessee; University of Vermont; and Utah State University.

The first published edition of the modules found widespread use nationwide and in many other countries of the world. User feedback from such extensive use, as well as the passage of time, called for the updating of the content, resources, and illustrations of the original materials. Furthermore, three new categories (K–M) had been added to the series, covering the areas of serving students with special/exceptional needs, improving students' basic and personal skills, and implementing competency-based education. This addition required the articulation of content among the original modules and those of the new categories.

Recognition is extended to the following individuals for their roles in the revision of the original materials: Lois G. Harrington, Catherine C. King-Fitch and Michael E. Wonacott, Program Associates, for revision of content and resources; Cheryl M. Lowry, Research Specialist, for illustration specifications; and Barbara Shea for artwork. Special recognition is extended to the staff at AAVIM for their invaluable contributions to the quality of the final printed products, particularly to Robin Ambrose for typesetting; to Marilyn MacMillan for module layout, design, and final artwork; and to George W. Smith, Jr. for supervision of the module production process.

THE NATIONAL CENTER
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THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research.
- Developing educational programs and products.
- Evaluating individual program needs and outcomes.
- Providing information for national planning and policy.
- Installing educational programs and products.
- Operating information systems and services.
- Conducting leadership development and training programs.

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120 Driftmier Engineering Center
Athens, Georgia 30602

The American Association for Vocational Instructional Materials (AAVIM) is a nonprofit national institute.

The institute is a cooperative effort of universities, colleges and divisions of vocational and technical education in the United States and Canada to provide for excellence in instructional materials.

Direction is given by a representative from each of the states, provinces and territories. AAVIM also works closely with teacher organizations, government agencies and industry.

MODULE B-5

Select Student Instructional Materials

Second Edition

Module B-5 of Category B—Instructional Planning
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

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INTRODUCTION

Ideally, when you enter a classroom armed with a completed lesson plan, you fully intend to accomplish the following:

- Reach each student in the class
- Stimulate student interest
- Motivate each student to learn
- Give students information relevant to their real-world needs
- Achieve your lesson objectives

If it's up to just you and the lesson plan, you will probably fall short of that ideal. A teacher can't always be stimulating, motivating, relevant, and all things to all students. However, there is a wealth of help available to any teacher who will take a little extra time to look.

This help comes in the form of instructional materials—materials to use, to read, to listen to, or to view. With instructional materials to support your lesson, you can meet the needs of students with varying reading levels or with varying levels of expertise in the subject matter involved. Furthermore, materials allow students to reinforce what they have learned in the lesson, especially if their senses are involved.

In developing your skill in lesson planning, you probably learned that one part of the planning process is the selection of supporting materials. This module is designed to help you locate and obtain the kinds of student instructional materials that can, and probably will, add that extra thrust needed to push your lesson closer to that ideal goal.

NOTE: The general principles of how to locate and select instructional materials remain the same regardless of the type of material being sought. However, further, more-specific skills are needed if you are trying to select materials for use in a competency-based education (CBE) program or with students with special/exceptional needs.

A CBE program may require the acquisition or development of learning packages. Students with special/exceptional needs may need specially prepared materials, such as large-print books for the visually impaired.

Specific coverage of where and how to locate these specialized materials—and the criteria for selecting those that are appropriate—is provided in Module K-4, *Provide Instructional Materials for CBE*; and Module L-4, *Provide Appropriate Instructional Materials for Exceptional Students*.

ABOUT THIS MODULE

Objectives

Terminal Objective: For an actual teaching situation, select student instructional materials. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 37–38 (*Learning Experience III*).

Enabling Objectives:

1. After completing the required reading, demonstrate knowledge of the important considerations involved in selecting and obtaining student instructional materials (*Learning Experience I*).
2. Given a case study describing one teacher's procedures for selecting and obtaining student instructional materials for a lesson, critique the performance of that teacher (*Learning Experience II*).

Prerequisites

To complete this module, you must have competency in developing a lesson plan. If you do not already have this competency, meet with your resource person to determine what method you will use to gain this skill. One option is to complete the information and practice activities in the following module:

- *Develop a Lesson Plan,* Module B-4.

Resources

A list of the outside resources that supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions or in assessing your progress at any time.

Learning Experience I

Optional

Resources (e.g., textbooks, manuals, workbooks) for which you can determine the reading level using the Flesch reading formula.

Resources (e.g., publishers' catalogs, libraries) to use in becoming familiar with available student instructional materials.

Learning Experience II

No outside resources

Learning Experience III

Required

An actual teaching situation for which you can select student instructional materials.

A resource person to assess your competency in selecting student instructional materials.

General Information

For information about the general organization of each performance-based teacher education (PBTE) module, general procedures for its use, and terminology that is common to all the modules, see About Using the National Center's PBTE Modules on the inside back cover. For more in-depth information on how to use the modules in teacher/trainer education programs, you may wish to refer to three related documents:

The *Student Guide to Using Performance-Based Teacher Education Materials* is designed to help orient preservice and inservice teachers and occupational trainers to PBTE in general and to the PBTE materials.

The *Resource Person Guide to Using Performance-Based Teacher Education Materials* can help prospective resource persons to guide and assist preservice and inservice teachers and occupational trainers in the development of professional teaching competencies through use of the PBTE modules. It also includes lists of all the module competencies, as well as a listing of the supplementary resources and the addresses where they can be obtained.

The *Guide to the Implementation of Performance-Based Teacher Education* is designed to help those who will administer the PBTE program. It contains answers to implementation questions, possible solutions to problems, and alternative courses of action.

Learning Experience I

OVERVIEW

After completing the required reading, demonstrate knowledge of the important considerations involved in selecting and obtaining student instructional materials.

You will be reading selected pages of Smith and Nagel, *Instructional Media in the Learning Process,* which are provided in this learning experience, pp. 6–13.

You will be reading the information sheet, Selecting and Obtaining Instructional Materials, pp. 13–17.

You may wish to apply the Flesch reading formula, explained in the information sheet, to a sample text or other resource in your occupational area.

You may wish to identify current instructional materials available for your occupational area.

You will be demonstrating knowledge of the important considerations involved in selecting and obtaining student instructional materials by completing the Self-Check, pp. 20–23.

You will be evaluating your competency by comparing your completed Self-Check with the Model Answers, pp. 25–26.

For information concerning the relationship between learning and instructional media and materials, read the following selection from Smith and Nagel, *Instructional Media in the Learning Process*. In these pages, the authors present a strong case for the necessity of using media and materials. Using Edgar Dale's Cone of Experience as a basis, they show the importance of involving students' senses in the learning process and illustrate how media and materials can help you to do this. Common misconceptions about media are refuted, mistaken approaches to using media are exposed, and generalizations about what media and materials can do for you are presented.

INSTRUCTIONAL MEDIA IN THE LEARNING PROCESS

Not long ago a prominent local attorney and state senator severely criticized teacher educators because "teachers spend a whole semester learning to thread a motion-picture machine!" That statement represents not only misinformation, but a total lack of understanding of what is meant by instructional media and materials. To many, the term *audiovisual* conjures a darkened room, a screen, a whirring projector, and a movie to entertain kids. That's it—and nothing more. Consider the absurdity of the foregoing statement in the light of this:

> Instructional media and materials are everywhere around us. They are found within the student's total continuum of experience, from the concrete to the abstract, both outside and inside the classroom. They provide means whereby teachers teach (make possible the conditions for learning) and students learn!

If you accept the above statement, then the operation of equipment (the so-called nuts and bolts) is only a small part of the totality called instructional media and materials.

There are two ubiquitous problems, among others, that confront most beginning teachers—**discipline** and **variety.** Discipline problems don't just happen; they are caused, and your teaching methodology may be to blame. However, problems of control and discipline can be ameliorated by effective instruction—get some variety into your teaching.

Variety is the essence of media and materials. Media and materials can provide some of the answers; however, they are not a panacea because so much depends upon the situation, the teacher, his/her energy, his/her imagination, and those thirty or more unique personalities called a "class."

As an example of the different approaches that one may use with media and materials, we can cite the following. I know a teacher who is a great collector of gadgets and gimmicks. He brings to class his jeweled oil can, a giant Texas paper clip, a mink-covered beer can opener, a noiseless soup spoon, and even a revolving spaghetti fork.

The kids love all this, and he really entertains them. Of course, he gets their attention and interest and may even motivate them. The crucial question is, "How much learning is taking place in terms of the objectives of the instructional situation?" The results will be virtually nil unless the teacher can go beyond the gadget and gimmick phase and get into the real business of learning.

Now suppose the above teacher uses the gadgets to get them interested and then places this definition on the chalkboard:

> The usually red or yellow pome fruit of the family of Malacaae. This includes the quince, the pear, the hawthorne, and sometimes the rose family.

What is it? Students can come up with a variety of answers but are usually confused by the abstract verbiage of a perfectly good Webster definition. The teacher then brings forth a highly polished red and yellow apple—a concrete object that now makes the abstract *apple* understandable. This is one of the tasks of the teacher—to take that which is abstract and make it concrete, teachable, and understandable. This is the role of media and materials—they must be used as genuine **tools** to facilitate the learning process.

SOURCE: Excerpted and adapted from Hayden R. Smith and Thomas S. Nagel, *Instructional Media in the Learning Process* (Columbus, OH: Charles E. Merrill, 1972), pp. 3–16. Out of print; reprinted with the permission of the authors.

Instructional materials and media run the whole gamut of human experience from the very abstract to the very concrete. These experiences can be graphically portrayed in terms of a Cone of Experience (see sample 1). The base of the cone represents experiences that are direct, live, and purposeful. As we move up the cone through experiences that are increasingly abstract, we reach the apex and the principle tool of instruction: words—the most difficult teaching tool of all!

It is important to recognize that the eleven experiences depicted on the cone are not discrete items, but tend to overlap and integrate with other experiences. Nor are these experiences fixed or final in terms of levels of abstraction or concreteness. A field trip can be the most formalized, miserable, and abstract experience in the hands of an ineffective teacher. On the other hand, an educational film can be a real-life experience in the hands of a skillful teacher.

Another way of graphically portraying the media and materials continuum is in terms of a pyramid (see sample 2). For clarity of understanding, the pyramid concept may be a more effective device than the more complex Cone of Experience. The pyramid categorizes experience into three levels, moving from the concrete to the abstract. At the base are the real, live, concrete experiences. In the middle are the vicarious experiences available through mechanical representations of reality, the so-called audio and visual approaches. At the top of the pyramid are those vicarious experiences available through the use of abstract symbols—words.

Here is a good example of how the same concept, whether in the form of a cone or a pyramid, can be presented in five different ways, without altering the content, by using different materials and media. First, we can actually construct the cone on a flannel board using flannel-backed cards and discussing each of the eleven levels as we go along. Second, we can prepare a transparency of the cone for use on the overhead projector. Again, we can develop the cone by covering the material with a card and revealing the levels one at a time. Third, the same material can be shared as a handout by photocopying the page that contains the cone. Last, we can prepare a poster or flip chart of the same material.

Of importance to you in selecting certain materials and media is the answer to this question, "What will do the best job in terms of the teaching situation and the availability of media and materials?" Before this question can be answered, you must have some knowledge of the advantages and disadvantages of the different approaches.

The Senses—Pathways to Learning

Some wag has called "horse sense"—whatever that is—*stable thinking*. However, we never speak of "people sense," but we refer to the human senses. In learning, there is considerable evidence that seems to prove that the greater the sensory involvement, the more effective and permanent the learning.

To establish this relationship, the following survey was tried with several classes of inservice teachers. They were asked to write down three experiences they could never forget and three things they always seemed to forget. Records were kept over a period of two years.

Guess what experience the women could never forget? Childbirth! For the men, their richest experience (not always pleasant) was Service-connected: sunrise over Tokyo Bay; landing on the beaches of Iwo Jima; and the like. The number one forgetting experience was "names," followed by "losing keys" and "forgetting to fill the gas tank!"

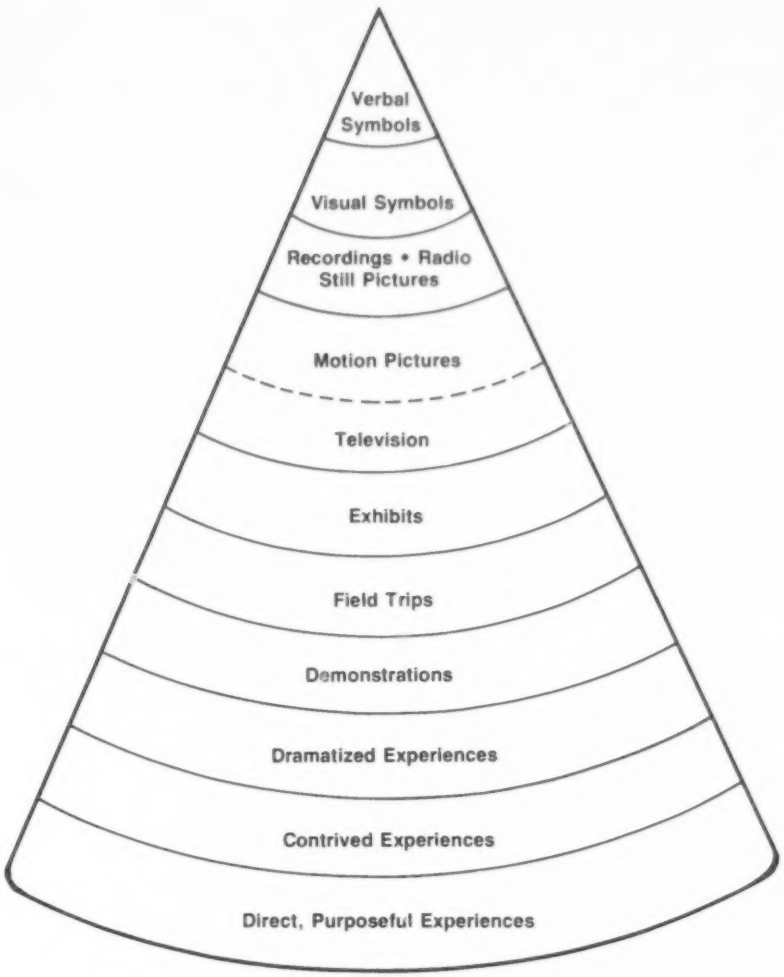
Note that what you can never forget usually involves a total sensory experience, and what you continually forget involves a lesser sensory experience. To a politician, names are his/her stock and trade, and he or she makes an extra effort never to forget a face or a name. To most of us, most names seem relatively unimportant, and we make little effort to remember them. I'll make a bet—you will never forget the name of the principal who offers you your first teaching contract!

These sensory mechanisms—eyes, ears, nose, taste buds, and nerve endings in our skin—are called perceptors and are our continuing contacts with the world of things and events. These tools of perception are the means by which we come to know our external environment.

However, the senses are merely data-gathering devices that send information to the brain. To make these impressions coherent involves thought, or cognition. Together, the brain's cognitive mechanism and our sensory apparatus provide us with the means of perception. In fact, we construct our world of things and events through mental processes that are fed data by the senses, and physical objects, as we know them, are the products of our own perceptions.

SAMPLE 1

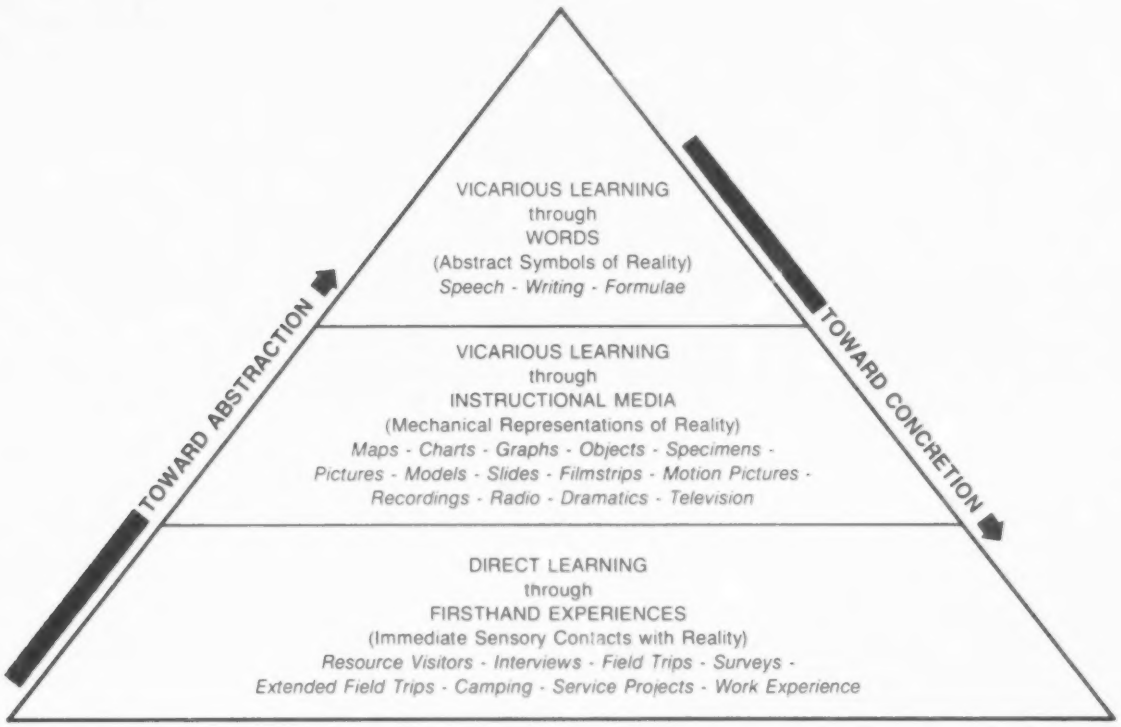
CONE OF EXPERIENCE



SOURCE: Edgar Dale, *Audiovisual Methods in Teaching*, Third Edition (New York, NY: Holt, Rinehart & Winston, 1969), p. 107.

SAMPLE 2

PYRAMID OF EXPERIENCE


VICARIOUS LEARNING
through
WORDS
(Abstract Symbols of Reality)
Speech - Writing - Formulae
VICARIOUS LEARNING
through
INSTRUCTIONAL MEDIA
(Mechanical Representations of Reality)
Maps - Charts - Graphs - Objects - Specimens -
Pictures - Models - Slides - Filmstrips - Motion Pictures -
Recordings - Radio - Dramatics - Television
DIRECT LEARNING
through
FIRSTHAND EXPERIENCES
(Immediate Sensory Contacts with Reality)
Resource Visitors - Interviews - Field Trips - Surveys -
Extended Field Trips - Camping - Service Projects - Work Experience
TOWARD ABSTRACTION
TOWARD CONCRETION

For a long time now, we have characterized humans as possessing five basic senses: sight, sound, taste, smell, and touch. Meanwhile, as we begin to learn more about the human organism, there is considerable evidence that we possess far more sensory apparatus. For example, a television film entitled "Gateways to the Mind," starring Frank Baxter, attempted to identify over twenty senses: fear, balance, well-being, and the like.

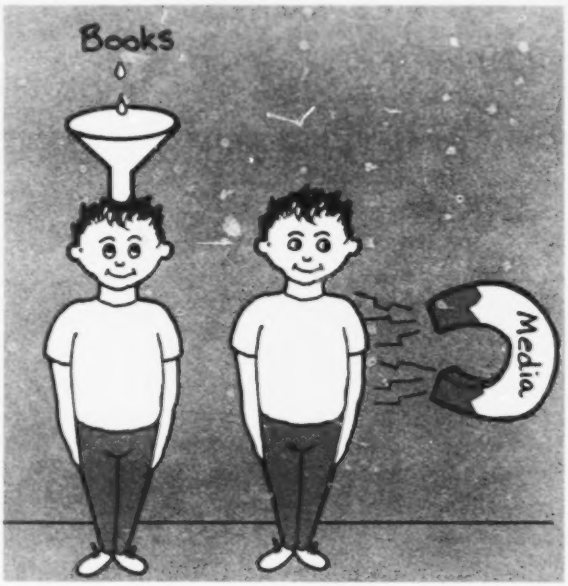
Traditionally, the whole media field was labeled with the misnomer *audiovisual materials of instruction*. Since it appeared that over 80 percent of learning involved the senses of sight and sound, such a label seemed appropriate. Today we know that human learning includes much more than simple eye and ear stimuli. It involves the total organism along with readiness, experience, and feeling, to name a few. Thus the term *instructional materials* or *instructional media* considers the tools and techniques of instruction and the sensory apparatus in a much broader context than "audiovisual materials."

Obviously, we learn best, though not always as efficiently, by experience—by seeing an object, listening to it, smelling it, tasting it, and touching it. This is also true of an event or happening. Although experience may be the best teacher, it is often a hard taskmaster; to learn about fire, just walk through one! Moreover, many firsthand experiences are not available to us (we cannot go to the South Pole or climb Mt. Everest).

To shortcut firsthand experience and eliminate some of the dire consequences, society has come up with something called a *school* and a manager of experience called a *teacher*. Although most schools attempt to provide as many concrete experiences as possible, the bulk of student learning involves vicarious experiences. These latter experiences involve two levels of abstraction: representations of reality (films, slides, pictures, models, television, and recordings) and abstract symbols of reality (words).

Because representations are closer to the real thing, they are usually more easily understood than abstract symbols, which have no direct relationship to reality. Words are merely convenient labels we have given to things, ideas, and concepts in order to develop a verbal and written language of communication.

It is logical to assume that those materials that are closely related to reality and appeal directly to the senses are more apt to be understood by students than those materials that are highly abstract symbols of reality. It seems logical, therefore, to use a variety of media and put some sense into your teaching!



Obviously, the senses of touch, taste, and smell do play an essential part in learning. Of the three, touch (tactile) experiences are more widely used in the classroom. For example, the demonstration technique is often the heart of the teaching method in vocational-technical classes. This is largely a telling, showing, and doing process, which involves psychomotor skills.

The success of a demonstration is largely dependent upon the teacher's ability to explain and show how something works. However, something that is often overlooked, but crucial to success, is student participation—involvement during or after the demonstration. In your planning, bring the sense of touch into play; let students handle, feel, touch, and manipulate the concrete objects used in the demonstration.

Sometimes in relation to touch, the term *kinesthetics* is used. This involves muscles, tendons, and nerve endings and is best explained by the term *getting the feel of it*.

The importance of taste and smell in food preparation classes is self-evident. Here we can often detect the quality of learning experience by a little sniffing and a few nibbles. Sometimes in other labs the nose and the tongue are valuable aids to learning. Whether the odors and tastes are good or bad, they can provide valuable learning clues.

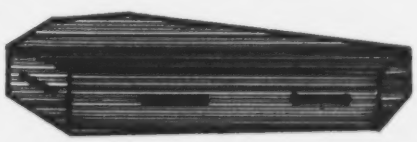
Why Do I Have to Use This Stuff?

The point is, you don't have to use all of this stuff. You can continue in the tradition of the lovable old 2 × 4 classroom fixture and call yourself a teacher. The 2 × 4 reference does not refer to your height nor your girth; it refers to those individuals whose teaching methodology is confined to the two covers of a book and the four walls of a classroom! If this is your approach to teaching, you'll soon be as extinct as the dodo bird and more obsolete than the horse and buggy.

In attempting to analyze why you ought to use instructional media and materials in your teaching, it may be helpful to look at what we may call "the process of education." For analysis, we can divide this process into four distinct phases.

The first of the phases is the **presentation phase.** Herein the teacher presents information through lecture or demonstration. It may also involve making assignments and an attempt by the teacher to interest or motivate students in the information being presented. Also, the teacher may use a variety of media and materials to expedite and clarify the presentation. Note that this phase is **one-way**—teacher-led and teacher-dominated!

The second phase is the **reflection phase.** In this phase, students reflect upon what has been presented in the first phase. This may be accomplished through classroom reading, work in the library, or through homework. Again, this phase is **one-way;** it is solely student activity, and the teacher **hopes** the student is sufficiently interested and motivated to reflect upon the presentation.



Class texts are the coffins of knowledge. They contain and preserve, but they also conceal. Rare is the textbook that breathes with life, rouses, stimulates, and satisfies.

In the third phase, **interaction,** we find the heart of the teaching-learning process. Together the teacher and students interact with that which has been presented and reflected upon. It is **two-way** and builds into the situation the most crucial aspect of communication theory—feedback. It may involve discussion, panels, and student reports and may incorporate other media and materials.

Through feedback not only does the student indicate his or her level of understanding, but the teacher receives information about the effectiveness of the teaching. Both the student and the teacher are learners, and without feedback there is no evidence that learning or effective teaching is taking place. To teach is to communicate effectively, and how can this be accomplished if the teacher has no knowledge that the message is getting across?

Some teachers believe that the **evaluation of students,** the fourth phase, is the most unpleasant part of teaching. It can be an onerous task if one thinks of evaluation only in terms of test scores and the labeling of students with the alphabet soup of ABCDF. The aim of education is learning, and the aim of evaluation ought to be the evaluation of learning and not a technique to separate the "sheep" from the "goats."

Of course, the teacher must make some evaluation of student progress, but it must be a **two-way** process to give students immediate knowledge of progress and to inform the teacher about the effectiveness of his/her teaching. If evaluation is **one-way,** it is dull, sterile, and unproductive—no wonder some teachers dread the task.

Education is a process whereby teachers teach and students learn—through presentation, reflection, interaction, and evaluation. These activities may be integrated into a single class period utilizing a wide variety of media and materials (see sample 3). Certain basic assumptions are integral to understanding why a teacher ought to use materials and media. These assumptions are not stricken in tablets of stone but can serve as helpful guidelines.

- **Materials and media are not designed to become a substitute for the effective teacher**—When they do take over the complete job of instruction, there is a question of whether they are being used properly.
- **Materials and media are not designed to supplant the textbook; they are designed to supplement the instructional process**—The textbook may or may not be the primary tool—something else might be much better.

SAMPLE 3

CIRCLE OF KNOWLEDGE

- **No device, technique, or material is superior to another per se**—Generally speaking, as far as groups are concerned, each is superior or inferior only in terms of its contributions to learning and in relation to a specific learning situation.
- **Each device, material, or technique has certain unique contributions that it can make to an instructional situation**—Each has certain advantages and disadvantages, and the teacher must be aware of these in order to use it effectively.
- **Instructional media and materials are not labor-saving devices**—In fact, physically, the teacher may work harder, but the rewards in terms of learning are worth the effort.

During the past fifty years, a significant body of research has been accumulated concerning instructional media and materials. In terms of the evidence, the contribution that this area can make to the effectiveness of teaching and learning is irrefutable. Of course there are exceptions, but the generalization is based upon sound empirical evidence.

Without risk of overstatement, we can put forth these generalizations. Instructional media and materials can do the following:

- Provide concrete experience
- Motivate and arouse interest
- Increase retention
- Develop continuity of thought
- Contribute to growth of meaning and vocabulary
- Provide variety in learning
- Provide experience not otherwise easily obtained
- Save instructional time

Media and materials can make you a more effective teacher—why not give them a chance?

For information concerning the practical procedures to be followed in selecting and obtaining student instructional materials to support a lesson, read the following information sheet.

SELECTING AND OBTAINING INSTRUCTIONAL MATERIALS

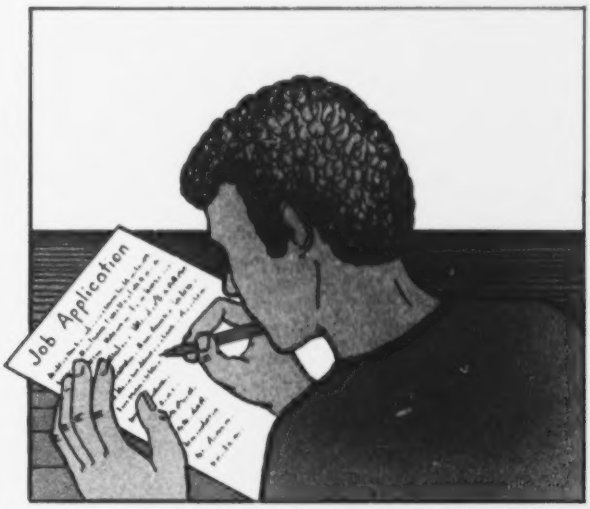
Using common sense alone, you would not plan to purchase the materials for a house without having some plans or a blueprint to go by, or without knowing where the house was to be built (on sand? on a hill?), or without knowing the needs of the people whose house it would be. Selecting student instructional materials starts with that same kind of common sense.

First, you must have a plan. Your lesson plan should include the learning objectives to be reached. This will **dictate** the use of certain basic materials and can **suggest** the use of others. For instance, a teacher whose lesson objective involves having students successfully *complete several types of job application forms* will undoubtedly need to supply the students with application forms—pencils, too, for the students who never have them.

The second point involves those pencils. To determine what materials are needed, you need to know your students. What are their interests, their needs, their abilities? Remember, there's more than one way to approach the same content via different points of interest and need. By involving students in the process of selecting materials for your lessons, they can give you some indication of their special interests.[1]

For example, a student who is working in her father's business, which she will someday take over, may not want nor need to know how to complete an application form. However, she could be interested in knowing how to construct an appropriate application form to use for hiring purposes at her father's business. She may want to know what to look for in an applicant's completed form.

1. To gain skill in determining the needs and interests of students, you may wish to refer to Module B-1, *Determine Needs and Interests of Students*.



In regard to student abilities, one of the prime concerns is reading level. A highly technical written explanation of how to perform a task will not help a student with a low reading level. However, that student may be perfectly capable of performing the task if given a different sort of explanation. Students' reading levels are sometimes available in their permanent records, and many texts indicate the grade level for which they are written.

Low reading abilities are not confined, of course, to secondary students. Adults who are foreign-born, who originally had a minimal education, or who have gotten into poor reading habits over the years may have this same deficiency. Instructors of adult students should not take it for granted that these students can read well and should select instructional materials accordingly.

A method for determining the reading level of any written material you may wish to use has been developed by Rudolf Flesch. This method involves taking several 100-word samples from a text, counting the number of words in an average sentence in those samples, and then using special tables to compute the reading level. A simplification of the Flesch Reading Ease Formula is shown in sample 4 at the end of this information sheet.

Other methods have been constructed by George Spache, and by Edgar Dale and Jeanne S. Chall. Still another method you may wish to check is the cloze readability procedure, which has been thoroughly explained and discussed in a number of sources by John R. Bormuth.[2]

2. Additional information on procedures for determining students' reading levels is provided in Module M-1, *Assist Students in Achieving Basic Reading Skills.*

The last preliminary item to be considered involves the kinds of constraints within which the lesson must be taught. What amount of **time** will you have for the lesson? If you plan to devote only a two-hour block of time to the lesson, a film that takes the full two hours may not be helpful. Another time constraint to consider is called *lead time.* In other words, how much time do you have until the lesson must be taught? If you wanted to teach a lesson in two days, you could not consider renting a film that had to be ordered and received via mail.

What **facilities** are available to you? Using a film projector requires a totally darkened room. Thus, before you elect to use such equipment, you must consider whether you have access to a room that meets those conditions.

What **equipment** does the school or college have already available? A series of film loops may be ideal for a particular lesson, but if you don't have access to a film loop projector, the series will do you little good.

What kinds of **funds** are available for purchasing or renting additional materials? You may find an excellent film, but if its cost involves your whole budget allotment, it would probably be wise to consider using another type of instructional material.

Once you have determined (1) what you wish to accomplish; (2) the needs, interests, and abilities of your students; and (3) the constraints of time, money, equipment, and facilities, you can begin to look for the instructional materials that can help you to accomplish your instructional goals within those limits and constraints. The following is a list of many of the instructional materials you could consider:

Written Material
- Textbooks
- Supplementary texts
- Handbooks
- Periodicals
- Pamphlets
- Programmed materials
- Reference books
- Documents
- Clippings

Hardware
- Equipment
- Tools
- Machinery
- Computers

Other Media
- Films
- Filmstrips
- Single-concept film loops
- Television
- Radio
- Records
- Pictures, Drawings, Paintings
- Slides, Slide/Tapes
- Videotapes, Audiotapes
- Transparencies
- Microfilms
- Maps, Globes
- Graphs, Charts, Diagrams
- Models, Mock-ups
- Posters
- Collections, Specimens
- Actual objects
- Flannel boards
- Chalkboards
- Magnetic boards
- Flip charts

There are a number of sources for these instructional materials. You can check the school or college library, the town library, a university library, or a district resource center. There you can find educational texts and periodicals that often include suggested materials for specific topics. Trade catalogs, publishers' catalogs, or film catalogs are another source of information about instructional media and materials.

Staff at the state department of vocational-technical education may also be able to make suggestions and indicate to you materials they have produced. Colleagues in your occupational service area, the area supervisor, or the district supervisor can usually give very specific suggestions, particularly concerning materials in your occupational area or locally produced materials. Another excellent source is business and industry; many firms have pamphlets and other materials available.

Any material that you consider using must be previewed. Even if your supervisor suggested its use and guaranteed its superiority, it may not fit your particular situation as defined by your objectives, your students, and your constraints. In addition to allowing you to check the quality and relevance of the material, a preview session gives you time to become familiar with the material and to prepare questions about it to use during class to lead discussion.

When you are previewing materials, the kinds of questions you should be answering are based, in part, on the constraints you described initially and, in part, on some characteristics of the lesson content itself:

- Does the content match my lesson objective(s)?
- Will the material fit with the instructional method(s) I planned to use?
- Is the content accurate and up-to-date? Totally? In part?
- Is the content logically sequenced?
- Is the material appropriate for the grade level of my students?
- Can each of my students handle the vocabulary used?
- Will this material motivate each of my students?
- Is this material geared to the abilities, needs, and interests of all my students? some of my students?
- Will this material fit into my time constraints?
- Do I have access to the equipment (projector, tape deck, etc.) necessary to use this material? Is it in good operating condition?
- Do I have the facilities necessary to use this material effectively?
- Do I have access to the funds necessary to purchase or rent this material?
- Is the material well produced technically? (Is the film's sound clear and audible? Is the print in the text easy to read?)
- Does the material have validity? (Does the author or producer indicate that it has been proven that it will do what it is intended to do?)

If you are looking for materials for demonstration purposes or student use, such as hardware (tools and machinery) or software (consumables such as lumber, flour, typing paper, or nuts and bolts), you need to check a few additional items. These materials should be the same as those the students would be expected to use on the job. They should be in good operating condition. With consumables, enough must be supplied to allow for a number of restarts or wastage.

The degree of student participation will also indicate to you how much material or how many tools and machines you will have to have available. For example, it takes only one tool if students are to watch the teacher demonstrating a skill, but more tools are required if each student is to perform the skill independently.

Once you have previewed your initial selections, you are ready to decide which selections are appropriate and which are not. If necessary, you may have to do more searching and previewing in order to obtain the most appropriate materials. When you have made the final selection of the student instructional materials you will use for the lesson, you are ready to present your lesson as planned, making the materials available to the students.

There is, however, one last thing to remember. When you decide to teach that lesson again to another class, your materials have to be reviewed and reevaluated based on the new set of conditions: (1) different students with different needs, interests, and abilities; (2) slightly different objectives; (3) different limits of time, equipment, or facilities; and (4) if time has passed, the availability of more up-to-date materials. However, not all of your needs may be met by existing resources; it may be necessary or preferable at times to use teacher-made materials.[3]

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3. To gain skill in preparing teacher-made materials, you may wish to refer to Module B-6, *Prepare Teacher-Made Instructional Materials*, and other modules covering the use of media and materials in Category C: Instructional Execution.

SAMPLE 4

APPLYING THE FLESCH FORMULA

Follow these rules and procedures in applying the Simplified Flesch Formula.

A. Selection of Samples
   1. Take enough written samples from the text to make a fair test. To make your samples random, go by a strictly numerical scheme (e.g., selecting random page numbers from a given book) rather than picking "good" or "typical" samples.
   2. Each sample should start at the beginning of a paragraph. Example: In a 152-page book, take the first paragraphs on each of pages 7, 25, 78, 122. Page numbers are chosen "blind" without looking at these pages.

B. Counting the Number of Words
   1. Start counting the words. Stop when you reach 100. You need 100 words for each sample.
   2. Count contractions and hyphenated words as one word.
   3. Count numbers and letters as words, if separated by spaces. Example: *1948* and *C.O.D.* would each count as one word.

C. Counting the Number of Sentences
   1. Count complete sentences or complete units of thought. Some sentences are marked off by colons or semicolons.
   2. Don't break up sentences joined by conjunctions such as *and* or *but*.

D. Figuring Average Sentence Length
   1. When using several samples, figure the average sentence length for all the samples combined.
   2. Total the number of words in all of the samples (4 samples would have 400 words) and divide by the number of sentences in all of the samples.

E. Count the One-Syllable Words
   1. Count all the one-syllable words in all of the 100-word samples and divide the total number of one-syllable words by the number of samples.

F. Figuring the Reading Ease Score
   1. Apply the average sentence length in words and the average number of one-syllable words per sample to the Flesch Reading Ease Index Table to arrive at the reading ease index number and then use the Flesch Conversion Table to compute the estimated reading grade.

Now, consider the following example:

A. You have counted out the following 100-word sample from a text.

> You are probably familiar with three types of tape recorders: reel-to-reel, cassette, and cartridge. (1) The eight-track tape recorders which are made for use in automobiles are an example of the cartridge type. (2) Since you will probably not be working with the cartridge type in a school situation because of its limitations, the cartridge recorder will not be discussed directly in this information sheet. (3) However, the principles discussed here will generally apply to cartridge recorders. (4) The two tape recorders pictured below—the reel-to-reel and the cassette—are the machines which you will most likely be using in your classroom or laboratory. (5)

SOURCE: Adapted from J. N. Farr, J. J. Jenkins, and D. G. Paterson, "Simplification of Flesch Reading Ease Formula," *Journal of Applied Psychology*, 35 (October 1951): 333-337. Copyright 1951 by the American Psychological Association. Reprinted by permission.

You counted the number of sentences (indicated by circled numbers) and found there were five. You counted the number of one-syllable words (indicated by check marks) and found there were 64.

B. Next, you converted your "number of sentences" into "average sentence length" by dividing the total words in your sample (100) by the number of sentences (5). One hundred divided by five equals twenty (20).

C. Then you consulted the Flesch Reading Ease Index Table (a partial table follows) to determine your index number. In the line containing the Number of One-Syllable Words per Hundred Words, you located the number "64." In the column containing the Average Sentence Length, you located the number "20." The point at which the line and the column come together is "50," which is your index number.

Average Sentence Length	Number of One-Syllable Words per Hundred Words												
	84	82	80	78	76	74	72	70	68	66	64	62	60
9	94	90	87	84	81	78	74	72	68	65	61	58	56
10	93	89	86	83	80	77	73	71	67	64	60	57	55
11	92	88	85	82	79	76	72	70	66	63	59	56	54
12	91	87	84	81	78	75	71	69	65	62	58	55	53
13	90	86	83	80	77	74	70	68	64	61	57	54	52
14	89	85	82	79	76	72	69	67	63	60	56	53	50
15	88	84	81	78	75	71	68	66	62	59	55	52	49
16	87	83	80	77	74	70	67	65	61	58	54	51	48
17	86	82	79	76	73	69	66	64	60	57	53	50	47
18	85	81	78	75	72	68	65	63	59	56	52	49	46
19	83	80	77	74	71	67	64	62	58	55	51	48	45
→ 20	82	79	76	73	70	66	63	61	57	54	(50)	47	44

D. Finally, you consulted the following Flesch Conversion Table to convert your index number to an estimated reading grade. Since "50" is your index number, falling in the "50 to 60" range, the estimated reading level of your sample is "10th to 12th Grade."

Reading Ease Score	Estimated Reading Grade
90 to 100	5th Grade
80 to 90	6th Grade
70 to 80	7th Grade
60 to 70	8th to 9th Grade
→ **50 to 60** →	**10th to 12th Grade**
30 to 50	13th to 16th Grade (College)
0 to 30	College Graduate

In the information you just read is an explanation of the Flesch formula for determining the reading level of written materials. You may wish to select some sample resources used in your occupational area and apply the formula to them. If you are an inservice teacher, you may then wish to compare the results to the reading levels of your students. A data sheet, a partial Flesch Reading Ease Index Table, and a Flesch Conversion Table are provided here for your use in completing this activity.

DATA SHEET

Application of the Flesch Reading Ease Formula

TITLE _____ READABILITY LEVEL _____

AUTHOR(S) _____ PUBLISHER _____

Samples	Page No.	Words	One-Syllable Words	Sentences	Score	Grade
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

FLESCH READING EASE INDEX TABLE

Average Sentence Length	Number of One-Syllable Words per Hundred Words																						
	84	82	80	78	76	74	72	70	68	66	64	62	60	58	56	54	52	50	48	46	44	42	40
9	94	90	87	84	81	78	74	72	68	65	61	58	56	52	49	45	42	40	36	33	29	27	23
10	93	89	86	83	80	77	73	71	67	64	60	57	55	51	48	44	41	39	35	32	28	26	22
11	92	88	85	82	79	76	72	70	66	63	59	56	54	50	47	43	40	38	34	31	27	25	21
12	91	87	84	81	78	75	71	69	65	62	58	55	53	49	46	42	39	37	33	30	26	24	20
13	90	86	83	80	77	74	70	68	64	61	57	54	52	48	45	41	38	35	32	29	25	23	19
14	89	85	82	79	76	72	69	67	63	60	56	53	50	47	44	40	37	34	31	28	24	22	18
15	88	84	81	78	75	71	68	66	62	59	55	52	49	46	43	39	36	33	30	27	23	21	17
16	87	83	80	77	74	70	67	65	61	58	54	51	48	45	42	38	35	32	29	26	22	20	16
17	86	82	79	76	73	69	66	64	60	57	53	50	47	44	41	37	34	31	28	25	21	19	15
18	85	81	78	75	72	68	65	63	59	56	52	49	46	43	40	36	33	30	27	24	20	18	14
19	83	80	77	74	71	67	64	61	58	55	51	48	45	42	39	35	32	29	26	23	19	17	13
20	82	79	76	73	70	66	63	60	57	54	50	47	44	41	38	34	31	28	25	22	18	16	12
21	81	78	75	72	69	65	62	59	56	53	49	46	43	40	37	33	30	27	24	21	17	15	11
22	80	77	74	71	68	64	61	58	55	52	48	45	42	39	36	32	29	26	23	20	16	14	10
23	79	76	73	70	67	63	60	57	54	51	47	44	41	38	35	31	28	25	22	19	15	13	9
24	78	75	72	69	66	62	59	56	53	50	46	43	40	37	34	30	27	24	21	18	14	12	8
25	77	74	71	68	65	61	58	55	52	49	45	42	39	36	33	29	26	23	20	17	13	11	7
26	76	73	70	67	64	60	57	54	51	48	44	41	38	35	32	28	25	22	19	16	12	10	6
27	75	72	69	66	63	59	56	53	50	47	43	40	37	34	31	27	24	21	18	15	11	9	5
28	74	71	68	65	62	58	55	52	49	46	42	39	36	33	30	26	23	20	17	13	10	8	4
29	73	70	67	64	61	57	54	51	48	45	41	38	35	32	29	25	22	19	16	12	9	7	3
30	72	69	66	63	60	56	53	50	47	44	40	37	34	31	27	24	21	18	15	11	8	6	2
31	71	68	65	62	59	55	52	49	46	43	39	36	33	30	26	23	20	17	14	10	7	5	1
32	70	67	64	61	58	54	51	48	45	42	38	35	32	29	25	22	19	16	13	9	6	4	
33	69	66	63	60	57	53	50	47	44	41	37	34	31	28	24	21	18	15	12	8	5	2	
34	68	65	61	59	56	52	49	46	43	40	36	33	30	27	23	20	17	14	11	7	4	1	
35	67	64	60	58	55	51	48	45	42	38	35	32	29	26	22	19	16	13	10	6	3		
36	66	63	59	57	54	50	47	44	41	37	34	31	28	25	21	18	15	12	9	5	2		
37	65	62	58	56	53	49	46	43	40	36	33	30	27	24	20	17	14	11	8	4	1		
38	64	61	57	55	52	48	45	42	39	35	32	29	26	23	19	16	13	10	7	3			

FLESCH CONVERSION TABLE

Reading Ease Score	Estimated Reading Grade
90 to 100	5th Grade
80 to 90	6th Grade
70 to 80	7th Grade
60 to 70	8th to 9th Grade
50 to 60	10th to 12th Grade
30 to 50	13th to 16th Grade (College)
0 to 30	College Graduate

To get a realistic idea of the types of instructional materials that are available for your occupational area, you may wish to write to, or visit in person, one or more of the following: publisher, library, state department, school- or university-based resource center, resource person, inservice teacher, etc. Through these sources, you can obtain catalogs of materials or view in person the variety of materials available.

The following items check your comprehension of the material in the Smith and Nagel reading, pp. 6–13; and the information sheet, Selecting and Obtaining Instructional Materials, pp. 13–17. Each of the 11 items requires a short essay-type response. Please explain fully, but briefly, and make sure you respond to all parts of each item.

SELF-CHECK

1. Some people feel that using media just involves learning to operate a few machines. How is it, then, that the media specialists hired by some schools and colleges had to spend so much time training for the position?

2. Explain the statement, "**Variety** is the essence of media and materials."

3. What effect can the use of a variety of media and materials have on classroom discipline?

4. Give an example of an **abstract concept**, and explain how it could be made more concrete by media and materials.

5. The statement, " Media and materials are labor-saving devices," can be argued both ways. Give examples of how media and materials can both decrease and increase a teacher's work load.

6. If media and materials can really increase learning and can really be motivational, why shouldn't a teacher do the following:

   a. Teach solely with media?

   b. Pick media solely on its ability to motivate?

7. What practical constraints (other than the technical quality of the media itself) govern a teacher's selection of media? If a teacher doesn't consider those constraints, what problems can arise?

8. Rudolf Flesch developed a measurement device that can help a teacher to select appropriate materials. What is the device, and why is it important?

9. Describe several different reasons why a teacher should always preview media and materials.

10. In purchasing consumables, what general rule of thumb helps a teacher to know how much to buy? Why is this important?

11. Prove or disprove the following statement: "A teacher who carefully plans and successfully executes a superior lesson, supported by carefully chosen media and materials, can continue to use the exact same plan in its entirety throughout his/her teaching career."

NOTES

Compare your written responses to the self-check items with the model answers given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL ANSWERS

1. Knowing how to run a projector is only a very small part of the total competence needed. Using instructional media really means having the skill to select and obtain various kinds of student instructional materials that will meet the needs of different students, will enliven and reinforce the lesson topic, and are of good quality.

2. Instructional media and materials allow and encourage two types of variety. First, each individual student can be exposed to a subject through various senses: listening, viewing, touching, etc. In lecture or discussion, students only **hear** about how to detect an engine malfunction.

   Media allow students to see that engine malfunctioning and to hear the sounds that indicate that malfunction. Models or real objects can allow students to explore the differences between the functional and dysfunctional engine. Perhaps, they can even smell the smell that indicates the engine is malfunctioning. This can be motivating, and each new experience can serve to reinforce the learning in the prior experience. Furthermore, things that involve total sensory experiences are things students will likely never forget.

   Second, using a variety of media means that many students with varying needs, interests, and abilities can be provided with different materials on the same subject that are appropriate to their individual needs, interests, and abilities.

3. A student who is bored or who has nothing to do is a potential discipline problem. A lesson supported by interesting media and materials can lessen the chances of a student's becoming bored. If students are asked to use what they have learned via a single activity, slower students may have trouble understanding and give up. More capable students may finish quickly and be left with nothing to do. An activity supported by a variety of media and materials allows the slower students the extra explanation they need, and the more capable students the advanced information they need to stay motivated.

4. Assume your students are involved in a lesson on getting a job. You tell them that in approaching an employer, they should be "poised." What does "poised" look like? A film or a book with case study examples can reduce the concept of "poised" to concrete behaviors that students can relate to.

5. The statement is true in the sense that, **in the long run,** using the kind of media and materials that really result in students' mastering each concept is less laborious than reviewing and reteaching that concept periodically. It is true in the sense that it's less work than trying to achieve 100 percent student understanding by lecture or discussion alone. In those cases, "true" would be a proper response.

   However, selecting, obtaining, and preparing instructional media and materials does involve increased preparation time. Media and materials are not intended to be labor-saving devices in the sense that you can present a class-length film to illustrate a concept, and, thus, have nothing to do. On the contrary, you need to spend time selecting a film appropriate to class needs. You need to preview that film. You need to generate questions about the film in order to direct a follow-up class discussion. These materials help you teach; they don't teach for you.

6. a. Media and materials should be used **in addition** or as **alternatives** to a textbook or other primary tool. Media and materials are not designed so that you use **just** media instead of **just** a textbook. They allow you more options to choose from and work very well in combination.

   b. Although media and materials should motivate, that's not all they should do. A fun film with nothing whatsoever to do with the objective is a distraction, not a help. It could even allow students to get the impression that you're saying, "Here's a film that you'll like—then we'll have to get down to the boring task at hand." What should happen with media and materials is that the task at hand should become clearer and more interesting.

7. Media and materials only do what you intend them to do if they are used properly. Thus, you need to check such constraints as available time, space, equipment, and funds in advance. For instance, assume you reserve a popular film months in advance, and you can have it for only one day. What happens if it arrives and there are no funds to pay for it? What happens if the film takes 55 minutes and your class is 40 minutes long? What happens if the projector isn't available that day? By checking ahead of time, you can select the best material to meet the conditions or arrange to create conditions that allow the use of a particular piece of media or material.

8. Rudolf Flesch developed a method for measuring the reading level of written materials. The device is important because the reading level at which materials are written varies. Materials at too low a reading level can bore or insult students. Materials at too high a reading level can confuse or frustrate students. By checking the reading level of materials in advance, you can be sure of providing students with materials they can handle.

9. By previewing media and materials in advance, you can determine whether the content is accurate; whether it is consistent with other information being presented in the lesson and supports the lesson objective; whether it meets the needs, interests, and abilities of your students; and whether it has the potential to motivate them.

   With written materials, you need to determine the reading level. A written pamphlet that seems to be relevant may be written at too high a reading level or only 5 of its 25 pages may be relevant. With audiovisuals, you need to check technical quality. A film that a colleague has sworn is excellent may be so well used that the sound is garbled.

   Above all, you should be familiar with the materials you use so you can lead follow-up discussions and be prepared for questions that may arise. By previewing media and materials, you can determine whether the information in the materials is reliable and whether it meets the needs, interests, and abilities of the students.

10. Students using consumables are supposedly learning by doing. If they have only one chance and have to stop if they ruin the material making a mistake, then they've only learned to do it **wrong.** They need enough chances to ultimately succeed.

11. This ideal plan is effective only insofar as it meets specific objectives in terms of the needs, interests, and abilities of a particular group of students. With a different group of students, the plan will probably have to be modified to meet their particular characteristics. In addition, the content of the materials in that plan may be out-of-date or inferior to more recently developed materials at the time the plan is next used.

Level of Performance: Your written responses to the self-check items should have covered the same **major** points as the model answers. If you missed some points or have questions about any additional points you made, review the Smith and Nagel reading, pp. 6–13; the information sheet, Selecting and Obtaining Instructional Materials, pp. 13–17; or check with your resource person if necessary.

Learning Experience II

OVERVIEW

Given a case study describing one teacher's procedures for selecting and obtaining student instructional materials for a lesson, critique the performance of that teacher.

You will be reading the Case Study, p. 28.

You will be critiquing the performance of the teacher described in the case study, using the Critique Form, pp. 29–31, to guide you.

You will be evaluating your competency in critiquing the teacher's performance in selecting and obtaining instructional materials by comparing your completed critique with the Model Critique, pp. 33–34.

The following case study describes how one vocational-technical teacher went about selecting student instructional materials for a lesson on job interviews. With the criteria for selecting and obtaining instructional materials in mind, read the situation described.

CASE STUDY

Mr. Eriksen plans to teach a unit on job interviews. The objective of the first lesson in this unit is *Based on reading, hearing, or viewing materials supplied by the teacher, students will work in small groups to develop lists of interview do's and don'ts.*

The class meets once a week for three hours; Mr. Eriksen plans to use one period for this lesson. The class with which he is working consists of twenty sophomores, eight of whom presently have part-time jobs. The class is fairly mixed in ability: ten read at the tenth-grade level; one reads at the fifth-grade level; three read at the eighth- or ninth-grade level; two read at the eleventh-grade level; two read at the twelfth-grade level; and two read above the twelfth-grade level.

Mr. Eriksen's school is fairly progressive and modern. There is an Instructional Media Center with a great deal of equipment kept in good operating condition: one videotape unit, six movie projectors, two slide projectors, three reel-to-reel tape recorders, ten cassette tape recorders, five stereo record players, four film projectors, ten individual slide viewers, ten single-concept film loop viewers, and three overhead projectors.

Adequate facilities for using this equipment, such as a listening laboratory, are available. The department also has a mimeograph machine, a ditto machine, a xerographic copier, and an infrared copier. In addition, Mr. Eriksen's departmental budget has enough money for rental charges (to cover obtaining films, etc.) and small purchases.

Mr. Eriksen looked for student instructional materials in three places. He looked through the handouts and texts that he had used in his college courses and he found a ten-year-old, twenty-page handout on job interviews written by a professor for a graduate course for work-study coordinators. He looked in a film catalog he had in his office, but he didn't find anything. He looked last in the university library, and he found one text and three educational journals with some relevant information on job interviews. He used the xerographic copier to reproduce twenty copies of each of the resources he had found—a total of 96 pages—and considered himself to be ready to do the lesson.

Below is a critique form with questions to guide you in preparing a written critique of Mr. Eriksen's competency in selecting and obtaining the student instructional materials for his lesson on job interviews. Read each question and indicate, by circling the YES or NO, whether Mr. Eriksen accomplished each item. Briefly explain your responses: what did he do correctly; what did he do incorrectly; what should he have done instead?

CRITIQUE FORM

1. Did the content of the instructional materials match the objectives of Mr. Eriksen's lesson plan? YES NO

   Explanation :

2. Did the material fit with the instructional method he planned to use for the lesson? YES NO

   Explanation :

3. Were the instructional materials he chose up-to-date? YES NO

   Explanation :

4. Did Mr. Eriksen consider the needs and interests of his students in selecting the material? YES NO

   Explanation :

5. Was the material geared to the grade level and abilities of all of his students? YES NO

   Explanation :

6. Will the instructional materials motivate his students to any great extent? YES NO

   Explanation :

7. Will this material fit into his time constraints well? YES NO

   Explanation :

8. Did Mr. Eriksen make good use of the funds, facilities, and equipment available to him? YES NO

Explanation :

9. Did Mr. Eriksen conduct a thorough search of available sources? YES NO

Explanation :

10. Were the materials he selected the ones he should have selected for that lesson in that school with those students? YES NO

Explanation :

NOTES

Compare your written critique of the teacher's performance with the model critique given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL CRITIQUE

1. YES. Considering **only** content, Mr. Eriksen was selecting appropriate materials. All the materials, in fact, discussed interviewing for jobs.
2. YES. According to his objective, he planned to have students absorb information individually and then discuss it in groups, so the photocopied written material would be appropriate to that method.
3. NO. The handout was ten years old, and dates didn't seem to be a factor in the library materials he chose. He should have made a point of selecting materials based on timeliness rather than on whatever haphazard method he was using. Before deciding to use a ten-year-old explanation, he should have checked carefully to make sure that things had not changed in the real world since he had attended college.
4. NO. This is probably one of his biggest errors. At no time did his students' needs and interests seem to be a factor in his selection process. He should have involved the students to determine what prior experience they had had in interviewing for jobs. Eight students have part-time jobs, so their needs in the lesson may be quite different from those of the students who have never been employed. He should have looked for a variety of materials to meet these differing needs.
5. NO. Ninety-six pages of graduate-level college material, textbooks, and educational journals is definitely not appropriate for the student who reads at the fifth-grade level, and it is questionable whether many of the other students could handle it. He should have selected a variety of materials according to the different reading levels or some materials that didn't rely so heavily on the written word.
6. NO. Probably not. Reading about how to handle a job interview is not, in and of itself, exhilarating. Reading about it on page after page of reproduced material will not help. Again, a variety of materials geared more to tenth graders should have been selected.
7. NO. Most of Mr. Eriksen's students will need the entire period (or more) simply to complete the readings, leaving no time for discussion. He should have decided how much discussion time he wanted and then selected materials that could be easily handled by all students in the time allotted for independent work.
8. NO. He made poor use of the available facilities and equipment. It is not evil not to use them, but he should have made more effort to locate audiovisual materials since he had all the necessary equipment at his disposal. Reproducing copies of as many pages as he did for that many students was a very poor use of available funds.
9. NO. He used only the most obvious, most easily accessible sources. He should have checked with colleagues and supervisors. He should have checked for references in his own school library; even if he didn't use these in class, they could be suggested to students wishing to pursue the subject further. He should have checked more audiovisual sources. In addition, this would have been an excellent topic on which to tap business, industry, or public service organizations for materials. An employment agency would undoubtedly have pamphlets on this topic.
10. NO. He did a really poor job of it, all things considered. He should have considered his students, as well as the available time, funds, facilities, and equipment, and chosen materials accordingly. He should have checked more sources. He should also have gotten briefer, more readable materials and some audiovisual aids.

Level of Performance: Your completed critique form should have covered the same **major** points as the model responses. If you missed some points or have questions about any additional points you made, review the Smith and Nagel reading, pp. 6–13; the information sheet, Selecting and Obtaining Instructional Materials, pp. 13–17; or check with your resource person if necessary.

Learning Experience III

FINAL EXPERIENCE

For an **actual teaching situation,*** select student instructional materials.

For a single lesson you are planning to teach, select and obtain student instructional materials to support that lesson. This will include—

- taking into consideration all factors governing the selection of such materials
- searching all available sources, both people and places, for potential materials
- evaluating potential materials
- selecting appropriate materials
- listing your selections in the appropriate section of your lesson plan
- obtaining the selected materials

NOTE: As you complete each of the above activities, document your actions (in writing, on tape, through a log) for assessment purposes.

After you have completed your documentation, finalized your lesson plan, and obtained your materials, arrange to have your resource person review these items.

Your total competency will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 37–38.

Based upon the criteria specified in this assessment instrument, your resource person will determine whether you are competent in selecting student instructional materials.

* For a definition of "actual teaching situation," see the inside back cover.

NOTES

TEACHER PERFORMANCE ASSESSMENT FORM

Select Student Instructional Materials (B-5)

Name _____

Date _____

Resource Person _____

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

	LEVEL OF PERFORMANCE					
	N/A	None	Poor	Fair	Good	Excellent
In preparing to use instructional materials, the teacher:						
1. checked to see what equipment, facilities, and funds were available to him/her	☐	☐	☐	☐	☐	☐
2. checked several relevant sources for materials	☐	☐	☐	☐	☐	☐
3. allowed enough lead time to obtain all necessary materials	☐	☐	☐	☐	☐	☐
4. showed evidence of having previewed all materials to be used	☐	☐	☐	☐	☐	☐
5. obtained a variety of materials, if appropriate	☐	☐	☐	☐	☐	☐
The content of the selected materials:						
6. matches the lesson objective(s)	☐	☐	☐	☐	☐	☐
7. is up-to-date	☐	☐	☐	☐	☐	☐
8. is logically sequenced	☐	☐	☐	☐	☐	☐
The selected materials:						
9. fit the instructional method(s) to be used in the lesson	☐	☐	☐	☐	☐	☐
10. are appropriate for the grade level of the students involved	☐	☐	☐	☐	☐	☐
11. are appropriate for the vocabulary or reading level the students in his/her class should be able to handle	☐	☐	☐	☐	☐	☐
12. have potential to motivate the students	☐	☐	☐	☐	☐	☐
13. are geared to the abilities of the students	☐	☐	☐	☐	☐	☐
14. are geared to the needs and interests of the students	☐	☐	☐	☐	☐	☐
15. are well produced technically	☐	☐	☐	☐	☐	☐
16. could be effectively used within the time constraints of the lesson	☐	☐	☐	☐	☐	☐

	N/A	None	Poor	Fair	Good	Excellent
If equipment or tools were to be used, the teacher:						
17. made sure they were in good operating condition	☐	☐	☐	☐	☐	☐
18. selected those of the same type that students will be using in the real world	☐	☐	☐	☐	☐	☐
If consumables were to be used, the teacher:						
19. ordered enough to allow for wastage and restarts	☐	☐	☐	☐	☐	☐
20. obtained enough materials to allow for the desired amount of student participation	☐	☐	☐	☐	☐	☐

Level of Performance: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete to reach competency in the weak area(s).

NOTES

NOTES

ABOUT USING THE NATIONAL CENTER'S PBTE MODULES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual teaching situation when you are an intern, a student teacher, an inservice teacher, or occupational trainer.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills that you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the introduction, (2) the objectives listed on p. 4, (3) the overviews preceding each learning experience, and (4) the final experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- That you do not have the competencies indicated and should complete the entire module
- That you are competent in one or more of the enabling objectives leading to the final learning experience and, thus, can omit those learning experiences
- That you are already competent in this area and are ready to complete the final learning experience in order to "test out"
- That the module is inappropriate to your needs at this time

When you are ready to complete the final learning experience **and** have access to an actual teaching situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange to (1) repeat the experience or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped, (2) repeating activities, (3) reading supplementary resources or completing additional activities suggested by the resource person, (4) designing your own learning experience, or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual Teaching Situation: A situation in which you are actually working with and responsible for teaching secondary or postsecondary vocational students or other occupational trainees. An intern, a student teacher, an inservice teacher, or other occupational trainer would be functioning in an actual teaching situation. If you do **not** have access to an actual teaching situation when you are taking the module, you can complete the module **up to** the final learning experience. You would then complete the final learning experience later (i.e., when you have access to an actual teaching situation).

Alternate Activity or Feedback: An item that may **substitute** for required items that, due to special circumstances, you are unable to complete.

Occupational Specialty: A specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity.

Optional Activity or Feedback: An item that is not required but that is designed to **supplement** and enrich the required items in a learning experience.

Resource Person: The person in charge of your educational program (e.g., the professor, instructor, administrator, instructional supervisor, cooperating/supervising/classroom teacher, or training supervisor who is guiding you in completing this module).

Student: The person who is receiving occupational instruction in a secondary, postsecondary, or other training program.

Vocational Service Area: A major vocational field: agricultural education, business and office education, marketing and distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher/Instructor: The person who is completing the module.

Levels of Performance for Final Assessment

N/A: The criterion was not met because it was **not applicable** to the situation.

None: No attempt was made to meet the criterion, although it was relevant.

Poor: The teacher is unable to perform this skill or has only **very limited ability** to perform it.

Fair: The teacher is unable to perform this skill in an acceptable manner but has **some ability** to perform it.

Good: The teacher is able to perform this skill in an **effective** manner.

Excellent: The teacher is able to perform this skill in a **very effective** manner.

Titles of the National Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation
- A-1 Prepare for a Community Survey
- A-2 Conduct a Community Survey
- A-3 Report the Findings of a Community Survey
- A-4 Organize an Occupational Advisory Committee
- A-5 Maintain an Occupational Advisory Committee
- A-6 Develop Program Goals and Objectives
- A-7 Conduct an Occupational Analysis
- A-8 Develop a Course of Study
- A-9 Develop Long-Range Program Plans
- A-10 Conduct a Student Follow-Up Study
- A-11 Evaluate Your Vocational Program

Category B: Instructional Planning
- B-1 Determine Needs and Interests of Students
- B-2 Develop Student Performance Objectives
- B-3 Develop a Unit of Instruction
- B-4 Develop a Lesson Plan
- B-5 Select Student Instructional Materials
- B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution
- C-1 Direct Field Trips
- C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
- C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
- C-4 Direct Students in Instructing Other Students
- C-5 Employ Simulation Techniques
- C-6 Guide Student Study
- C-7 Direct Student Laboratory Experience
- C-8 Direct Students in Applying Problem-Solving Techniques
- C-9 Employ the Project Method
- C-10 Introduce a Lesson
- C-11 Summarize a Lesson
- C-12 Employ Oral Questioning Techniques
- C-13 Employ Reinforcement Techniques
- C-14 Provide Instruction for Slower and More Capable Learners
- C-15 Present an Illustrated Talk
- C-16 Demonstrate a Manipulative Skill
- C-17 Demonstrate a Concept or Principle
- C-18 Individualize Instruction
- C-19 Employ the Team Teaching Approach
- C-20 Use Subject Matter Experts to Present Information
- C-21 Prepare Bulletin Boards and Exhibits
- C-22 Present Information with Models, Real Objects, and Flannel Boards
- C-23 Present Information with Overhead and Opaque Materials
- C-24 Present Information with Filmstrips and Slides
- C-25 Present Information with Films
- C-26 Present Information with Audio Recordings
- C-27 Present Information with Televised and Videotaped Materials
- C-28 Employ Programmed Instruction
- C-29 Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation
- D-1 Establish Student Performance Criteria
- D-2 Assess Student Performance: Knowledge
- D-3 Assess Student Performance: Attitudes
- D-4 Assess Student Performance: Skills
- D-5 Determine Student Grades
- D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management
- E-1 Project Instructional Resource Needs
- E-2 Manage Your Budgeting and Reporting Responsibilities
- E-3 Arrange for Improvement of Your Vocational Facilities
- E-4 Maintain a Filing System
- E-5 Provide for Student Safety
- E-6 Provide for the First Aid Needs of Students
- E-7 Assist Students in Developing Self-Discipline
- E-8 Organize the Vocational Laboratory
- E-9 Manage the Vocational Laboratory
- E-10 Combat Problems of Student Chemical Use

Category F: Guidance
- F-1 Gather Student Data Using Formal Data-Collection Techniques
- F-2 Gather Student Data Through Personal Contacts
- F-3 Use Conferences to Help Meet Student Needs
- F-4 Provide Information on Educational and Career Opportunities
- F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations
- G-1 Develop a School-Community Relations Plan for Your Vocational Program
- G-2 Give Presentations to Promote Your Vocational Program
- G-3 Develop Brochures to Promote Your Vocational Program
- G-4 Prepare Displays to Promote Your Vocational Program
- G-5 Prepare News Releases and Articles Concerning Your Vocational Program
- G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
- G-7 Conduct an Open House
- G-8 Work with Members of the Community
- G-9 Work with State and Local Educators
- G-10 Obtain Feedback about Your Vocational Program

Category H: Vocational Student Organization
- H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations
- H-2 Establish a Vocational Student Organization
- H-3 Prepare Vocational Student Organization Members for Leadership Roles
- H-4 Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities
- H-5 Supervise Activities of the Vocational Student Organization
- H-6 Guide Participation in Vocational Student Organization Contests

Category I: Professional Role and Development
- I-1 Keep Up-to-date Professionally
- I-2 Serve Your Teaching Profession
- I-3 Develop an Active Personal Philosophy of Education
- I-4 Serve the School and Community
- I-5 Obtain a Suitable Teaching Position
- I-6 Provide Laboratory Experiences for Prospective Teachers
- I-7 Plan the Student Teaching Experience
- I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education
- J-1 Establish Guidelines for Your Cooperative Vocational Program
- J-2 Manage the Attendance, Transfers, and Terminations of Co-op Students
- J-3 Enroll Students in Your Co-op Program
- J-4 Secure Training Stations for Your Co-op Program
- J-5 Place Co-op Students on the Job
- J-6 Develop the Training Ability of On-the-Job Instructors
- J-7 Coordinate On-the-Job Instruction
- J-8 Evaluate Co-op Students' On-the-Job Performance
- J-9 Prepare for Students' Related Instruction
- J-10 Supervise an Employer-Employee Appreciation Event

Category K: Implementing Competency-Based Education (CBE)
- K-1 Prepare Yourself for CBE
- K-2 Organize the Content for a CBE Program
- K-3 Organize Your Class and Lab to Install CBE
- K-4 Provide Instructional Materials for CBE
- K-5 Manage the Daily Routines of Your CBE Program
- K-6 Guide Your Students Through the CBE Program

Category L: Serving Students with Special/Exceptional Needs
- L-1 Prepare Yourself to Serve Exceptional Students
- L-2 Identify and Diagnose Exceptional Students
- L-3 Plan Instruction for Exceptional Students
- L-4 Provide Appropriate Instructional Materials for Exceptional Students
- L-5 Modify the Learning Environment for Exceptional Students
- L-6 Promote Peer Acceptance of Exceptional Students
- L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students
- L-8 Improve Your Communication Skills
- L-9 Assess the Progress of Exceptional Students
- L-10 Counsel Exceptional Students with Personal-Social Problems
- L-11 Assist Exceptional Students in Developing Career Planning Skills
- L-12 Prepare Exceptional Students for Employability
- L-13 Promote Your Vocational Program with Exceptional Students

Category M: Assisting Students in Improving Their Basic Skills
- M-1 Assist Students in Achieving Basic Reading Skills
- M-2 Assist Students in Developing Technical Reading Skills
- M-3 Assist Students in Improving Their Writing Skills
- M-4 Assist Students in Improving Their Oral Communication Skills
- M-5 Assist Students in Improving Their Math Skills
- M-6 Assist Students in Improving Their Survival Skills

Category N: Teaching Adults
- N-1 Prepare to Work with Adult Learners
- N-2 Market an Adult Education Program
- N-3 Determine Individual Training Needs
- N-4 Plan Instruction for Adults
- N-5 Manage the Adult Instructional Process
- N-6 Evaluate the Performance of Adults

RELATED PUBLICATIONS

Student Guide to Using Performance-Based Teacher Education Materials
Resource Person Guide to Using Performance-Based Teacher Education Materials
Guide to the Implementation of Performance-Based Teacher Education
Performance-Based Teacher Education: The State of the Art, General Education and Vocational Education

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